



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,494	07/10/2001	Peter M. Wild	3048.1000-002	5907

21005 7590 04/22/2002

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

NGUYEN, SON T

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 04/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/902,494

Applicant(s)

WILD ET AL.

Examiner

Son T. Nguyen

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 10 July 2001.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-33 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-33 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

PETER M. POON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

fm P

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,8.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1,11-15,29-30,33** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For claim 1, lines 16-17 and 22, "at least one of the apertures" should be changed to ---the at least one aperture---to avoid lack of antecedent basis. For claims 11-15,29-30,33, all line 1 except claim 15 which is line 2, "the one or more apertures" should be changed to ---the at least one aperture---to avoid lack of antecedent basis.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2,5-13,18-19,21-22,24-30** are rejected under 35 U.S.C. 102(b) as being anticipated by Hendrixson et al. (US 4,103,456).

For claim 1, Hendrixson et al. disclose a method for injecting a fluid into a woody plant 11-14 comprising the steps of providing a fluid reservoir with a fluid (col. 4, lines 63-65 and col. 5, lines 11-19), a carrier gas reservoir 34 with a carrier gas (the gas in the aerosol can 34), a needle 22 comprising an inner conduit 25, a sealed tip 28,29, an

outer surface, and at least one aperture 27 connecting the inner conduit and the outer surface and proximate to the point at a distal end of the needle, an injector 26,21,35 connecting the fluid reservoir and the carrier gas reservoir to a proximal end of the needle, wherein the injector directs fluid out of the at least one aperture; inserting the needle into the woody plant (fig. 5); injecting, via the injector, at least a portion of the fluid from the fluid reservoir with at least a portion of the carrier gas from the gas reservoir, through the inner conduit of the needle and out of the least one aperture and into the woody plant, thereby injecting the fluid into the plant.

For claim 2, Hendrixson et al. further disclose the woody plant is a tree (col. 2, lines 47-50).

For claim 5, Hendrixson et al. further disclose the fluid is a treatment for a disease condition such as Dutch Elm Disease (col. 4, lines 34-40).

For claim 6, Hendrixson et al. further disclose the fluid is a treatment for an insect infestation such as the elm bark beetle (col. 4, line 59).

For claim 7, Hendrixson et al. further disclose the fluid is a nutrient such as a growth regulators or fertilizers (col. 4, line 64).

For claim 8, Hendrixson et al. further disclose the fluid is a suspension (col. 4, lines 39-49).

For claim 9, Hendrixson et al. further disclose the needle is inserted into expansion tissue 12,13.

For claim 10, Hendrixson et al. further disclose the needle includes two apertures 27.

For claim 11, Hendrixson et al. further disclose the at least one aperture are at a forward angle such as 90° relative to the longitudinal axis of the needle.

For claim 12, Hendrixson et al. further disclose the angle of 90° which is about 50° to about 130° relative to the longitudinal axis of the needle.

For claim 13, Hendrixson et al. further disclose the angle of 90° which is about 60° to about 120° relative to the longitudinal axis of the needle.

For claim 18, Hendrixson et al. disclose a method for injecting a medicament into a plant comprising the steps of providing a medicament (col. 4, lines 34-65); mixing the medicament with a compressed carrier gas 34 (also, col. 5, lines 11-19); and directing the medicament and compressed carrier gas through the surface of a plant to inject the medicament into the plant.

For claim 19, Hendrixson et al. further disclose the medicament is selected from a fertilizer, a fungicide, a growth regulator and a hormone (col. 4, lines 34-65).

For claim 21, see the method which employs the injector apparatus taught by Hendrixson et al. as described above.

For claim 22, Hendrixson et al. further disclose the woody plant is a tree (col. 2, lines 47-50).

For claim 24, Hendrixson et al. further disclose the fluid is a treatment for a disease condition such as Dutch Elm Disease (col. 4, lines 34-40).

For claim 25, Hendrixson et al. further disclose the fluid is a treatment for an insect infestation such as the elm bark beetle (col. 4, line 59).

For claim 26, Hendrixson et al. further disclose the fluid is a nutrient such as a growth regulators or fertilizers (col. 4, line 64).

For claim 27, Hendrixson et al. further disclose the fluid is a suspension (col. 4, lines 39-49).

For claim 28, Hendrixson et al. further disclose the needle includes two apertures 27.

For claim 29, Hendrixson et al. further disclose the at least one aperture are at a forward angle such as 90° relative to the longitudinal axis of the needle.

For claim 30, Hendrixson et al. further disclose the angle of 90° which is about 50° to about 130° relative to the longitudinal axis of the needle.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3,4,14,23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendrixson et al. (as above).

For claims 3 & 23, Hendrixson et al. are silent about the plant being a palm tree. It would have been an obvious matter of choice to one having ordinary skill in the art at the time the invention was made to employ the injector apparatus of Hendrixson et al. on a palm tree depending on a user's preference to do so if happens that the palm tree is infested with pests.

For claim 4, Hendrixson et al. are silent about the method is repeated one or more times on the same woody plant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to repeat the method as taught by Hendrixson et al. depending on how bad the plant is infested with pests.

For claim 14, Hendrixson et al. show an angle of 90° but not an angle of about 65°. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the apertures of Hendrixson et al. angled at about 65°, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. **Claims 15-17,31-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendrixson et al. (as above) in view of Schoonman (US 3,295,254).

For claim 15, Hendrixson et al. are silent about at least a portion of the outer surface of the needle between the point and the at least one aperture includes a taper. Schoonman teaches an apparatus for injecting liquids into trees comprising a needle 10 having an outer surface, at least one aperture 16 and a sealed tip 12 with a point, wherein at least a portion of the outer surface between the point and the at least one aperture includes a taper (fig. 3, from the tip 12 to the first closest aperture 16 there is a taper) to help drive or force the needle into a tree T. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a taper as taught by Schoonman between the tip and the apertures of the needle of Hendrixson et al. so as to help drive or force the needle into a tree.

For claims 16 & 31, Schoonman further teaches the needle having a first portion 13,21,17 from a proximal end (at refs. 13,21,17) to a shoulder point (fig. 3, at refs. 14 & 16), wherein the outer surface of the first portion has a first taper (fig. 3, from refs. 21,17 to ref. 14), and a second portion (fig. 3, refs. 12 & 14) from the shoulder point to a distal end, wherein the second portion has a second taper which is substantially greater than the first taper. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the features as described in the above which is taught by Schoonman on the needle of Hendrixson et al. so as to help drive or force the needle into a tree.

For claims 17 & 32, Hendrixson et al. as modified by Schoonman are silent about the second taper has an angle of about 10° to about 50° relative to the longitudinal axis of the needle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the taper angle of Hendrixson et al. as modified by Schoonman of about 10° to about 50°, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

For claim 33, both Hendrixson et al. and Schoonman further disclose the at least one aperture (ref. 27 for Hendrixson et al. and ref. 16 for Schoonman) is located between the shoulder point and the proximal end.

8. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendrixson et al. (as above) in view of Banker (US 3,292,622 on form PTO-1449). Hendrixson et al. teach aerosol can 34 as a propellant for forcing or injecting the fluid

into a tree but are silent about the gas in the aerosol can being carbon dioxide, air or nitrogen. Banker teaches an inoculator which he employs CO<sub>2</sub> to provide power or thrust so that an inoculant or medicament can be introduced into the skin of a person. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ carbon dioxide, air or nitrogen as taught by Banker as the carrier gas in Hendrixson et al.'s aerosol can so as to provide a thrust to inject the fluid into a tree.

### ***Specification***

9. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

10. The following prior arts are made of record to provide the best available relevant examples of a method for injecting a fluid into a woody plant: Barber (2116591) teaches

a needle nozzle. Hecht (2309391) teaches a device for injectively treating plants.

Shibata (JP406169643A) teaches liquid injector for tree. Helsing et al. (5620516) teach wood-treating device. Graber (4596088) teaches apparatus for injecting a liquid into the vascular paths of a tree. Blake et al. (3832803) teach means and method for treating trees.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is (703) 305-0765. The examiner can normally be reached on Monday - Friday from 8:30 a.m. to 5:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon, can be reached at (703) 308-2574. The fax number of the Art Unit is (703)-306-4195. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4177.

Son T. Nguyen, *STN*  
Patent Examiner, GAU 3643  
April 17, 2002

  
PETER M. POON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600